REMARKS

Reconsideration of this application, as amended, is respectfully requested.

Claims 1-22 are pending. Claims 1-22 stand rejected

Claims 1, 8, 15, and 22 have been amended. Support for the amendments is found in the specification, the drawings, and in the claims as originally filed. Applicants submit that the amendments do not add new matter.

Rejections Under 35 U.S.C. § 102(a) and(e)

Claims 1, 8, 15, 22 stand rejected under 35 U.S.C. § 102 (a) and(e) as being anticipated by Yelland et al. U.S. Patent No. 6,219,678 ("Yelland"). The Examiner stated that

> Regarding claim 1, Yelland discloses all the claimed subject matter including accessing a reference array referencing at least one data object having a content stored in a corresponding memory location (see column 4, lines 23-32), determining a new memory location for the contents of each of the at least one data object and copying the contents of the at least one data object directly to the new memory location (see column 4, lines 35-46). The claimed negative limitation of "contents of each new data object does not get stored to a cache memory" is broad enough to read on the fact that Yelland is completely silent about storing in cache upon copying the content of a data object to a new location. Futhermore, there is no indication that at the time of Yelland's invention, every time content of a data object is copied to a new location, the content has to be stored in cache. Since a cache is known in the art to store frequently accessed data only, there is no reason to assume that data copied to the new memory location in Yelland for reclaiming memory occupied by the original object (column 4, lines 6-46) has to be also stored in cache.

(p. 3-4, Office Action 09/29/04) Yelland discloses that

> An important concept in memory management is the manner in which memory is allocated to a task, deallocated, and then reclaimed. Memory deallocation and reclamation may be explicit and controlled by an executing program, or may be carried out by another special purpose program which locates and reclaims memory which is unused, but has not been explicitly deallocated. "Garbage collection" is the term used in technical literature and the relevant arts to refer to a class of algorithms utilized to carry out storage management, specifically automatic memory reclamation. There are many known garbage collection algorithms, including reference counting, mark-sweep, and generational garbage collection algorithms. These, and other garbage collection techniques, are described in detail in a book entitled "Garbage Collection, Algorithms For Automatic Dynamic Memory Management" by Richard Jones and Raphael Lins, John Wiley & Sons, 1996.
>
> An object may be located by a "reference," or a small amount of information that can be used to access the object. One way to implement a reference is by means of a "pointer" or

> "machine address," which uses multiple bits of information, however, other implementations are possible. General-purpose programming languages and other programmed systems often use references to locate and access objects. Such objects can themselves contain references to data, such as integers or floating-point numbers, and to yet other objects. In this manner, a chain of references can be created, each reference pointing to an object which, in turn, points to another object.
>
> A subclass of garbage collectors known as "relocating" or "copying" garbage collectors, relocates objects that are still reachable by an executing program. Relocation of an object is accomplished by making a copy of the object to another region of memory, then replacing all reachable references to the original object with references to the new copy. The memory occupied by the original object may then be reclaimed and reused. Relocating garbage collectors have the desirable property that they compact the memory used by the executing program and thereby reduce memory fragmentation, which is typically caused by non-compacting garbage collectors.

(Yelland, Col. 4, Lines 6-46) Yelland also discloses that

> Systems and methods consistent with the present invention optimize the representation of associations by taking advantage of automatic memory management functions, such as garbage collection mechanisms. Relocating or copying garbage collection mechanisms relocate objects in order to reduce the fragmentation of memory in the face of object mortality and reclamation. Relocation entails copying an object's header and data from one area of memory to another, and thereafter updating all references to the object. The systems and methods consistent with the present invention take advantage of the relocating features of the garbage collection mechanisms to add or remove space in the object for storage of an association.

(Yelland, Col. 2, Lines 49-61)

Applicants respectfully submit that claim 1, as amended, is not anticipated by Yelland under 35 U.S.C. 102§(e). Amended claim 1 includes the following limitations:

> A method comprising:
> accessing a reference array, the reference array referencing at least one data object, each of the at least one data object having a contents stored in a corresponding memory location;
> determining a new memory location for the contents of each of the at least one data object; and
> copying the contents of the at least one data object directly to the new memory location thus creating a new data object for each of the at least one data object, each new data object having a new data object contents, the contents of the at least one data object copied using a non-temporal streaming store, such that upon copying the contents of the at least one data object to the new memory location, the contents of each new data object does not get stored to a cache memory.

(Amended claim 1) (emphasis added)

Applicants respectfully submit that Yelland does not teach the use of a non-temporal store as described in the specification and as claimed in amended claim 1. However, it is clear, from the Examiner's rejection of claim 22, that the Examiner believes such a limitation is disclosed in Yelland.

Applicants respectfully disagree and maintain that Yelland does not teach the use of a non-temporal store as claimed. Nevertheless, applicants have amended the claims to add the limitation that the non-temporal store is a "non-temporal streaming store". Applicants respectfully submit that such limitation is not disclosed by Yelland, even as broadly interpreted by the Examiner. Applicants further respectfully submit that none of the additional references cited by the Examiner overcome this deficiency of Yelland.

For these reasons, applicants respectfully submit that amended claim 1 is not anticipated, nor rendered obvious, by Yelland, alone or in combination with the Applicants' Admitted Prior Art (AAPA) or U.S. Patent No. 6,356,270 of Pentkovski et al. ("Pentkovski").

Given that claims 2 – 7 depend, directly or indirectly, from claim 1, applicants respectfully submit that claims 2 – 7 are, likewise, not anticipated, nor rendered obvious, by Yelland, alone or in combination with the AAPA or Pentkovski.

Given that claims 8, 15, and 22 include the limitation of a non-temporal streaming store, and that claims 9 – 14 and 16 – 21 depend, directly or indirectly, from claims 8 and 15, respectively, applicants respectfully submit that claims 8 - 22 are, likewise, not anticipated, nor rendered obvious, by Yelland, alone or in combination with the AAPA or Pentkovski.

It is respectfully submitted that in view of the amendments and arguments set forth herein, the applicable rejections and objections have been overcome. If there are any additional charges, please charge Deposit Account No. 02-2666 for any fee deficiency that may be due.

Respectfully submitted,

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